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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,820	03/11/2002	Mineyuki Kubota	220231U/SOPCT	9743

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1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

MCAVOY, ELLEN M

ART UNIT	PAPER NUMBER
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1764

8

DATE MAILED: 04/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/070,820	KUBOTA ET AL.	
	Examiner	Art Unit	
	Ellen M McAvoy	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2002 (pre.-amendment) .
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>6, 7</u> . | 6) <input type="checkbox"/> Other: _____ . |

Art Unit: 1764

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 4, 6, 8, 10, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (5,384,056) or (5,294,356). ✓

The Tanaka et al ["Tanaka"] references disclose a polycarbonate derived from adducts such as propylene oxide adducts of polyglycerols, and their use as a high viscosity lubricating oil for refrigerators. See column 1, line 55 to column 2, line 37 of '056, and column 3, line 48 to column 4, line 62 of '356. Tanaka teaches a process for preparing the polycarbonate which includes the step of treatment with an adsorbent such as activated clay or activated carbon/charcoal to remove a trace amount of impurities. Tanaka teaches that since a trace amount of ionic or polar compounds can be removed by such treatment, the resulting polycarbonate can be stored stably. See column 8, lines 32-38 of '056 and column 27, lines 49-54 of '356. The examiner is of the position that this meets the limitations of the above rejected

Art Unit: 1764

claims wherein process claim 1 includes “comprising a step of treating with an adsorbent”, and dependent claims 3 and 4 limit the adsorbent to activated carbon and activated clay.

Claims 1, 2, 5-8, 10, and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asahi Glass Co. (JP application No. 2-325617). ✓

Asahi Glass Co. [“Asahi”] disclose a process of purifying high viscosity polyethers by adding an adsorbent composed of magnesium silicate having specific properties to a crude product to apply adsorbing treatment thereto. Asahi teaches that the crude product is subsequently filtered, thus, additionally treated through a filter precoated with a filtering aid composed of diatomaceous earth having specific properties. The examiner is of the position that Asahi meets the limitations of the above rejected claims when the high purity oxygen-containing compound is a polyvinyl ether compound.

✓ Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egawa et al (5,449,472) in combination with Tanaka et al (5,384,056) or (5,294,356). ✓

Egawa et al [“Egawa”] disclose a lubricating oil for compression-type refrigerators which comprises a polyvinyl ether compound having the repeating units expressed by general formula (I) set forth in the abstract and in column 4, lines 42-49, which has excellent compatibility with a hydrofluorocarbon refrigerant. The polyvinyl ether compound of Egawa meets the limitation of the polyvinyl ether compound set forth in claim 2. The examples set forth in Egawa disclose

methods of preparing the polyvinyl ether compounds including the steps of washing to remove impurities. Applicants teach in the specification on page 4 that "it occasionally occurs that a compound having oxygen such as a polyvinyl ether compound is contaminated with polar substances or metal components during the process of production thereof and the volume specific resistance is decreased. As the method for increasing the decreased volume specific resistance, a treatment such as washing with an alkali or water is known. However, the effect of washing is not always sufficient. Therefore, development of a novel treatment process for increasing the volume specific resistance of the compound having oxygen such as a polyvinyl ether compound has been desired." However, it has been taught by the Tanaka references outlined above that a known step of treatment of oxygen containing compounds suitable for use as refrigeration lubricants to remove impurities includes interaction with an adsorbent such as activated clay or activated carbon/charcoal to remove a trace amount of impurities. As set forth above, Tanaka teaches that since a trace amount of ionic or polar compounds can be removed by such treatment, the resulting polycarbonate can be stored stably. Thus, the examiner is of the position that having the prior art references before the inventors at the time the invention was made it would have been obvious to have treated the known polyvinyl ether lubricant composition of Egawa with an adsorbent such as taught in Tanaka to remove trace impurities and to increase the volume specific resistance of the compounds.

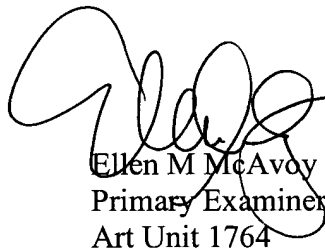
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M McAvoy whose telephone number is (703) 308-2510. The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (703) 308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Ellen M McAvoy
Primary Examiner
Art Unit 1764

EMcAvoy
April 10, 2003